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 (71)Applicant : AGENCY OF IND SCIENCE & TECHNOL  
 (72)Inventor : YONEDA KIYOSHI  
 MAMENO KAZUNOBU  
 KAWAHARA KEITA  
 INOUE YASUNORI

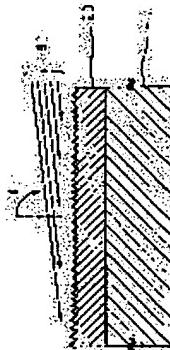
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## (54) SURFACE FLATTENING METHOD AND SOI SUBSTRATE FORMING METHOD USING SAID SURFACE FLATTENING METHOD

### (57)Abstract:

**PURPOSE:** To easily flatten a body surface without contaminating the body surface by rotating the body, and projecting an ion beam onto the surface of the body at an incidence angle of about 85° or more with respect to the normal direction of the surface.

**CONSTITUTION:** A single crystal spinel film 20 formed by CVD method is laminated on a single crystal silicon substrate 1. While the substrate 1 on which the spinel film 20 is formed is rotated in a horizontal plane, an argon ion beam is projected at an incidence angle of 80° or more with respect to the normal direction of the spinel film 20 surface. Thereby, fine unevenness on the spinel film 20 surface is etched and eliminated, so that the spinel film 20 surface can be flattened without contamination of the spinel film 20 surface or exfoliation of the spinel film 20, as observed in the case of the conventional polishing method.



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